2005 Issue I

CENTRAL REGION ENVIRONMENTAL NEWSLETTER

CENTRAL REGIONAL ENVIRONMENTAL OFFICE

US ARMY ENVIRONMENTAL CENTER

Secretary of the Army Recognizes Environmental Excellence, Fort Riley Wins Top 2004 Award in Installation Restoration Category

By Mike Heronemus
Staff Writer, Fort Riley Post

On January 5, 2005, the Secretary of the Army announced his award winners for environmental excellence for fiscal year 2004. Clean-up projects at Fort Riley earned the Secretary's top award for environmental stewardship in the restoration category. As a result of efficiencies on multiple projects during the past two years, cost savings have amounted to about $48.5 million. These are dollars that can be shifted to other environment restoration projects throughout the Army, said Craig Phillips, chief of the post's Conservation Division in the Directorate of Environment and Safety.

One of Fort Riley's cleanup projects conducted during the past two years was a successful soil remediation pilot study, Phillips said. The results of that study will be published so that others working in the restoration field may learn from it.

US Army Engineer School integrates environmental considerations into Army doctrine. ***Story on page 4***

The purpose of the pilot project was to clean up chlorinated solvent at an old motor pool and artillery gun shed area. The pilot project used a newly developed tool mounted on the arm of a tracked excavator to mix a chemical known as potassium permanganate with the contaminated soil to oxidize or chemically change the chlorinated solvent to innocuous materials.

Fort Riley environmental staff and others watch as a specially equipped excavator sprays and mixes a chemical into soil contaminated soils. *Photo courtesy of Fort Riley.*

The process cost less than other processes usually recommended to remediate such contamination, said Richard Shields, geologist and project manager. He estimated a savings of about $1.75 million resulting from choosing the pilot study process instead of using other available technology.

The treatment reduced the concentration of contaminant by 91 percent within three weeks.

The effectiveness of the process prompted Kansas regulators to agree to Fort Riley's plan to reduce sampling from 38 wells two times each year to 16 wells sampled once each year. This translates directly to an estimated savings of $2.5 million over 15 years.

Another project involved the former Southwest Funston and Camp Forsyth Landfills located adjacent to the Kansas and Republican Rivers that traverse nearby cities and rural areas. Serious erosion along the riverbanks threatened to release toxic landfill contaminants and Unexploded Ordnance (UXO) into the rivers. To reduce risks to human health and local ecosystems, Fort Riley constructed limestone baffles to provide riverbank stabilization, conducted periodic UXO surveys followed by UXO removal or detonation, seeded

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In This Issue

Chief Commentary

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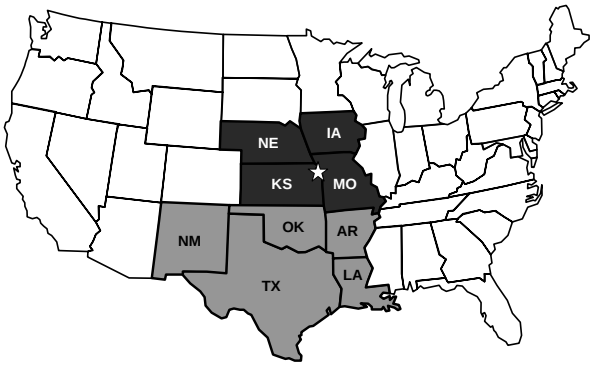
Well, spring is finally here, and I can only say "it's about time "! Traditionally, the period soon after the first of the year and through the spring is the busiest period for your Army Regional Environmental Offices (REO's). That's because it's the period when most of the state legislatures are in session, and things can move very fast. Often times we have only a couple of days to coordinate within the Army and with the other DOD components to prepare written or verbal testimony on legislation of interest.

When the Army REO's were set up ten years ago (more on that in another piece) the premise was that the Environmental Protection Agency's regional offices would be our primary focal points. That has turned out not to be the case. Instead, it's been the states that receive the most of our attention. Why do we need to be concerned about state laws & regulations? Here are some factoids extracted from a recent briefing:

- All 50 States are assuming a more prominent role in environmental regulation and enforcement.
- On average – Army REOs monitor 3,100 environmental bills nationally and more than 2,000 proposed state environmental regulations.
- At least half of those bills dealt with environmental initiatives the States operate on their own (I.e. are not implementing Federal laws/rule).
- 75 percent of the major environmental programs are delegated to the states.
- 173 State or local regulatory agencies develop and enforce environmental regulations.
- There are possible 1850 state/local programs that need to be tracked for new rules and changes.
- 90 percent or more of all enforcement actions are by State environmental agencies.
- States spend twice as much as EPA on environmental programs.

Having said all this, you can begin to see that DOD has a lot at stake in dealing with state and local governments. That is the primary reason why we have REOs in the first place and why the Army has an Environmental Legislative/ Regulatory Analysis and Monitoring Program – State (ELRAMP-S) program.

The primary means by which we communicate the results of our ELRAMP-S efforts to Army installations and other interested parties is through our monthly ***Central Regional Review***. We share these electronically through an email push and also they can be found also on the U.S. Army Environmental Center's website at: http://aec.army.mil/usaec/reo/creo03.html .



CREO Nine-State Area of Responsibility

DoD REC Region 7
Army REC Region 6
Army REC Region 7

Regional Events Calendar

4/26-27 Midwest Environmental Conference, Kansas City, MO

5/2-5 TCEQ Trade Fair and TXEP Meeting, Austin, TX

5/24-26 Federal Facilities Conference, Kansas City, MO

5/24-27 1st Annual DOD/DOE Low- Level and Mixed Radioactive Waste Generators Conference, St. Louis, MO.

5/25-27 NACo WIR Conference, Tacoma, WA

6/14-15 Air Force IRP Summit, Denver, CO

8/22-25 Second Conference on Sustainable Range Management, San Antonio, TX.

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Fort Sill Natural Resources Branch Efforts Dramatically Increases Endangered Species Population

By Spc. William Shelton
Fort Sill Cannoneer

Nearly 30 years ago, the black-capped vireo, *Vireo atricapillus*, a diminutive bird smaller than a sparrow, faced the very real threat of extinction in Oklahoma and other neighboring areas. In 1988, a count of the black-capped vireos on Fort Sill resulted in an alarming discovery. Only 10 males and seven females were found. This discovery prompted Fort Sill to take action. So in 1989 Army environmental specialists began taking steps to bring the vireos local population back from the brink of extinction.

Their hard work, patience, and tenacity worked. In 2003, the estimated count of vireos was 321 males and 308 females. And the numbers for 2004 appear to be even higher, said Glen Wampler, a biologist with Fort Sill's Natural Resources Branch. "Early estimates for 2004 are up near 1,000 for combined male and females," he said. A dramatic increase when one considers that in 1988, there were only 17 black-capped vireos on all of Fort Sill.

This increase in population is surprising considering that the black-capped vireo was not wide spread in the first place. This small bird is native primarily to Texas, northern Mexico and south central Oklahoma. Before the 1950's, however, the black-capped vireo was found in Kansas, as well as in Texas and Oklahoma. But, the last reported sighting in Kansas was in 1953.

Male black-capped vireo. Photo taken at Wichita Mountains National Wildlife Refuge near Fort Sill. *Photo courtesy of Pat Velte, BackyardBirdcam.*

Overall, the black-capped vireo populations had decreased to the point that the U.S. Fish and Wildlife Service (USFWS) placed this vireo on the endangered species list on October 6, 1987.

Although the birds have little affect on the insect population or plant life in the area, "They are part of the ecosystem of this area," Wampler said.

Secretive male black-capped vireo on an oak branch. *Photo courtesy of Pat Velte, BackyardBirdcam.*

There are many environmental threats to the black-capped vireo , but the primary threat at Fort Sill is the brown-headed cowbird. It is thought that up to 90 % of black-capped vireos' nests are infected by these brood parasites.

Other threats include loss of habitat due to urban development, grazing sheep, goats and exotic herbivores, excessive range land improvements, and natural succession including juniper invasion.

The actual process of parasitism is the removal of the hosts' eggs from an untended nest by the female cowbird and who then deposits her own egg. But even if the hosts' eggs are not removed, the much smaller black-capped vireo still have great odds against survival because the brown-headed cowbird incubation period is shorter (10 - 12 days) than the black-capped vireos (14 - 17 days).

As a result, the hosts' eggs still have little chance for survival even if they do hatch because the hatchlings can rarely compete for nest space and food with the older and larger cowbird hatchlings.

"Fort Sill is using traps baited with live cowbirds, along with abundant seed and water, to remove the cowbirds from the vireo's area," Wampler said. The trapping occurs from early May through late June. Wampler said the success of the endangered species program here is disproportionate to its cost. "In compari-

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US Army Engineer School, Directorate of Environmental Integration – Working Toward a Sustainable Future

By Rebecca Johnson, Ph.D. and Al Vargesko
USAES-DEI

A paradigm shift in a major program and bringing about a cultural change in the entire Army from the bottom to the top - how about that for a challenge. That's exactly the challenge facing the US Army Engineer School's (USAES) Directorate of Environmental Integration (or DEI as it is called).

As the U.S. Army Training and Doctrine Command's proponent for "environmental integration," DEI is the centerpiece for changes recently heralded by the release of *The Army Strategy for the Environment – Sustain the Mission – Secure the Future*. The paradigm shift involves moving the Army's environmental approach from a "compliance focus" to sustainability. This is no small challenge. And while the DEI can't do it alone, they are uniquely situated and staffed to weave this philosophy into the culture and fabric of everyday life in the Army - through Doctrine, Organizations, Training, Materiel, Leadership and education, Personnel and Facilities (DOTMLPF).

And while they are at it – DEI continues to provide direct support to our forces fighting the global war on terrorism, by being the "go to" organization for practical, hands-on guidance and training on environmental stewardship - from base camp to unit level.

Environmental Compliance officer inspects drainage grill at vehicle wash area. *Photo courtesy of Fort Leonard Wood.*

Here are but a few examples of the many facets of DEI's mission that highlight the central role they play in "integrating" the new paradigm into training and environmental planning considerations that support military operations:

- Organizational design efforts by DEI provide the "transforming" Engineer Regiment with the recommended mix of environmental positions needed to support the Future Engineer Force and the Army's Future Force.
- An important DEI responsibility is the identification of environmental considerations, threats, and issues - and the sharing of innovative ideas and techniques within the Army and with the other military services. DEI's key functional role, among others, is ensuring that techniques and solutions are being integrated into Army and Joint doctrine, organizational design, civilian and military environmental training development and integration, and material acquisition requirements documents.
- The DEI develops a wide array of Doctrine products for the Army like - Field Manual (FM) 3-100.4, *Environmental Considerations in Military Operations* (under revision to FM 3-34.500 *Environmental Considerations in Contingency Operations*); a new Training Circular under development entitled *Command Environmental Program*; and development of standards for a multi-service Environmental Baseline Survey.
- DEI prepares leadership and educational products to inform military and civilian leaders about environmental considerations. DEI provides training materials for the civilian leadership courses at Fort Leavenworth [i.e., the Intern Leadership Development Course (ILDC), Organizational Leadership for Executives (OLE), and the LEAD (or Leadership Education and Development) course]. DEI is also developing an Environmental Management System (EMS) awareness video for use by installation personnel throughout the Army and currently has available a Senior Leader EMS Awareness Training Support Package (TSP) available on the DENIX website.

Training session demonstrating proper technique for packing spilled materials. *Photo courtesy of US Army.*

Environmental professionals at installations are crucial to and viewed as a critical link in providing Soldiers environmental awareness, as they train and prepare for war. For the third year in a row, DEI hosted the annual Army Environmental Training Symposium - a key training event for civilian and military participants, with technical expertise and instruction provided by the US Army Environmental Center (USAEC), US Army Center for Health Promotion and Preventive Medicine (CHPPM), US Army Logistics Management College (ALMC), the Army Director of Environmental Programs (DEP), the Army Installation Management Agency (IMA) and the US Army Corps of Engineers (USACE). This year over 250 Army environmental professionals received world-class training. DEI's crucial importance in training arena is clearly demonstrated by:

- DEI Training products that include an online Environmental Compliance Officer (ECO) Course, a digital training catalog, environmental lessons learned in the form of a CALL (i.e.,

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LTC Michael Tarpley, Louisiana Army National Guard, Wins Secretary of the Army Cultural Resources Management Award

Based at Camp Beauregard, La., Lieutenant Colonel Michael Tarpley serves as Cultural Resources manager for the Louisiana Army National Guard (LAARNG).

LTC Tarpley created and leads a comprehensive National Guard program managing cultural resources at five major installations and 80 armories across the Pelican State. Collectively known as Fort Louisiana, they comprise 1,352 buildings and 29,000 acres of training land. Since founding the program in 1997, he has also been responsible for two National Register Historic Districts, 43 National Register structures and 511 American Indian cultural sites to date including traditional fishing grounds, sacred areas and flintknapping sites.

Some examples of LTC Tarpley's successes are:

- Developed four formal Native American Consultation Agreements one of which was the first and only programmatic agreement for implementation of Section 106 of the National Historic Preservation Act (NHPA) on National Guard land, forged between the Advisory Council on Historic Preservation (ACHP), the State Historic Preservation Office (SHPO), the National Guard Bureau (NGB), the LAARNG and tribal nations.
- Identified more than 500 previously unknown archaeological sites during Phase I Archaeological Surveys and four new sites eligible for the National Register of Historic Places (NRHP) in FY 2004 during Phase II Testing.
- Created a Native American Memorandum of Understanding (MOU) with Louisiana and displaced tribes that significantly increased tribal access to military lands for collection of plants for ceremonial and other uses.
- Conducted the first DoD Traditional Cultural Property (TCP) inventory of places of religious and cultural significance to federally recognized tribes affiliated with Fort Louisiana.

LTC Tarpley who documented the oral history of the Choctaw WWI and the Comanche WWII code talkers poses with Charlie Chibity, the last surviving Comanche code talker. *Photo Courtesy of US Army.*

As part of LTC Tarpley's site protection program, Soldiers install remote cameras and sensors to monitor and protect archeological significant sites on LAARNG lands. *Photo courtesy of the US Army.*

LTC Tarpley's consultation and interpersonal skills have been of great value in venues outside of Fort Louisiana. These skills proved invaluable when Native Hawaiian and tribal nations and were overwhelmed by Federal Communications Commission (FCC) requests for cultural site clearance for proposed cell tower locations. Given their limited resources, it was impossible for the tribes to comply with the 30-day timeframe for response, leading the FCC to interpret non-response as consent and begin construction. LTC Tarpley partnered with United South and Eastern Tribes (USET) and legal counsel, and agreements were negotiated with FCC Chairman Michael Powell. Using the LAARNG model, an MOU was created requiring the FCC to engage in government-to-government consultation and tribal reimbursement.

In addition, LTC Tarpley assisted Fort Benning with the transfer of lands containing sacred sites to the city of Columbus, Georgia, creating a national precedent by upholding the Native American Graves Protection and Repatriation Act (NAGPRA) on federal lands once transferred out of federal control.

LTC Tarpley initiated a program to utilize and expand upon the heightened cultural sensitivity of troops returning from Operations Enduring Freedom and Iraqi Freedom. These briefings given to troops deploying and training on Louisiana military lands have been expanded to build upon the new heightened awareness for overall cultural resources protection.

LTC Tarpley's energy, compassion, character and strong sense of duty power the LAARNG's complex cultural resources management program, making it a model for other installations. He is dedicated to his stakeholders and drives forward efficient and successful programs that have proven transferable, partners with key tribal, community, state and federal leaders, and works hard to ensure these programs advance the federal, state and community missions of LAARNG.

The success of LTC Tarpley's programs greatly enhances the training lands for the LAARNG, serving the military mission of readiness. His ability to balance Soldier training needs with cultural resources protection and sensitivity to the community leads to unique and diplomatic solutions.

Matters of Interest to All DoD Components

Legally Brief

Search Warrants and Environmental Law: Are They Needed for Agency Inspections?

By Stanley Rasmussen
CREO Regional Counsel

In a previous segment of *Legally Brief (2002 Issue IV)*, the relation of environmental law to the United States Constitution was discussed. As stated in that article, congressional authority for creating environmental laws generally stems from Article I, Section 8, clause 3 of the Constitution, commonly known as the "Commerce Clause." While it may appear that there are no other links between environmental laws and the Constitution, the Fourth Amendment of the Bill of Rights to the constitution can also play an important role in environmental law.

The Fourth Amendment of the United States Constitution provides the following protection:

"The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

Known as the "search and seizure clause" of the Constitution, the Fourth Amendment generally requires that governmental entities obtain a warrant before searching a person's home or place of business. However, environmental inspections conducted by federal and state environmental agencies are typically conducted without the use of a search warrant. This article will explore and discuss the legal reasoning for why warrants are not a regular component of environmental inspections.

In various 1967 rulings, the U.S. Supreme Court made it clear that the fourth Amendment's prohibition on unreasonable searches and seizures is applicable to commercial premises, as well as private homes. Accordingly an owner or operator of a business has an expectation of privacy in commercial property. This expectation exists not only with respect to traditional police searches conducted for the gathering of criminal evidence but also with respect to administrative inspections designed to enforce regulatory statutes. However, the Supreme Court has also ruled that the expectation of privacy in commercial premises is less than the similar expectation in an individual's home.

The reduced level of expectation of privacy stems from Supreme Court rulings concerning "closely regulated" industries that have a history of government oversight. In those cases, the Court reasoned that people choosing to engage in regulated businesses do so with the knowledge that business records will be subject to government inspection. In fact, the Supreme Court has even gone so far as to state that a warrantless inspection of commercial premises may be reasonable within the meaning of the Fourth Amendment.

In 1987, in the case of *New York v. Burger, 482 U.S. 691 (1987),* the Supreme Court established a three-part standard for warrantless inspection of closely regulated businesses. First, there must be a "substantial" government interest that informs the regulatory scheme pursuant to which the inspection is made. For example, the federal interest in protecting the health, safety and welfare of citizens with environmental regulation would qualify as a substantial government interest. Second, the warrentless searches must be "necessary to further the regulatory scheme." As an example of this, the Supreme Court recognized that forcing mine inspectors to obtain a warrant before every inspection might alert the mine owners and operators to the impending inspection, thereby frustrating the purposes of the Mine Safety and Health Act, i.e., to detect and deter safety and health violations. The final criterion established by the Court requires that a statute's inspection program provide an adequate degree of certainty and regularity to provide a constitutionally adequate substitute for an inspection. In other words, the regulatory statute must advise an owner that search can be conducted, must define the scope of the potential search, and must limit the discretion of the inspecting officers.

Most major federal environmental laws confer authority upon the U.S. Environmental Protection Agency (EPA) to conduct inspections of facilities and property to ensure regulatory compliance. In addition, most states have either adopted the federal statutory language conferring such warrantless search authority or have otherwise statutorily authorized warrantless entry onto property to conduct inspections. Following are examples of federal environmental statue language authorizing warrantless inspections.

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- The Clean Water Act (CWA) in 33 U. S.C. § 1318 provides EPA "a right of entry to, upon, or through any premises in which an effluent source is located" or a premises "in which any records required to be maintained" for CWA compliance are located. The CWA also provides that EPA "may at reasonable times have access to and copy any records, inspect any monitoring equipment or method...and sample any effluents which the owner or operator of such a source is required to sample under such a clause."
- The Clean Air Act (CAA) in 42 U.S.C. § 7414 provides the EPA "a right of entry to, upon, or through any premises...or in which any records any records are required to be maintained... and may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required...and sample any emissions" from a regulated emissions source.
- The Resource Conservation and Recovery Act (RCRA) in 42 U.S.C. § 6927 authorizes EPA "to enter at reasonable times any establishment or other place where hazardous wastes are or have been generated, stored, treated, disposed of, or transported from...to inspect and obtain samples... of any such wastes and samples of any containers or labeling for such wastes."
- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in 42 U.S.C. § 9604 authorizes EPA "to inspect and obtain samples from any vessel, facility, establishment, or other place or property...or from any location of any suspected hazardous substance or pollutant of any contaminant." EPA is also authorized "to inspect and obtain samples of any containers or labeling for suspected hazardous substances or pollutants or contaminants." Each inspection is also to be "completed with reasonable promptness."
- Toxic Substances Control Act (TSCA) inspection language can be found in 15 U.S.C. §2610.
- Safe Drinking Water Act (SDWA) inspection language can be found in 42 U.S.C. § 300j-4.
- Noise Control Act inspection language can be found in 42 U.S.C. § 4912.
- Emergency Planning and community Right to Know Act inspection language for fire departments can be found at 42 U.S.C. § 11022.

As reported in the Government Institute's *Environmental Law Handbook*, EPA has generally avoided any test of constitutionality of the warrantless search authorizations provided in the environmental laws discussed above, by not challenging the issue. If an EPA inspector is refused admission, EPA, as a standard procedure, will obtain a search warrant and not even try to use the statutory authority. This approach avoids a constitutional confrontation.

Today, the permitting process is the standard means in which agencies authorize searches without a warrant. Most environmental permits now typically include standard "boilerplate" language authorizing the federal, state, or local regulatory authority to conduct warrantless inspections, audits, or similar assessment visits to verify compliance with terms of the permit. Although the Supreme Court has not ruled on the constitutionality of these provisions, this practice appears to be well established by the various federal, state and local environmental enforcement agencies and well accepted by the regulated community.

Then how should agency inspections at military installations be handled. While this author is unaware of any DoD policy or guidance concerning this issue, the June 2002 edition of the *Environmental Criminal and Civil Liability Handbook* recommends that EPA not be refused access to conduct a warrantless inspection, because the inspector will simply obtain a warrant. The Handbook goes on to make the following recommendations:

Actions Upon Notice of Inspection—Although an installation may occasionally receive notice of an impending inspection, which would provide opportunity and time to conduct a "mock inspection" and ensure that records are in order, advance notice of an inspection is typically not provided. In those cases where notice of an inspection occurs shortly before the arrival of the inspector, the installation should alert the Environmental Program Manager (EPM) and try to ensure that the EPM is available to escort the inspection team throughout the installation. In addition, post security should be informed how to respond when the inspectors arrive and who to contact upon their arrival.

Inspection Escort Team—The installation escort team should be composed of environmental and legal personnel familiar with both the day-to-day operations and management of the on-post facilities, as well as the installation's regulatory permit conditions and environmental laws in general. At a minimum, it is recommended that the inspection team include the EPM and the installation's Environmental Legal Specialist (ELS). If possible, the escort team should also include the installation media mangers applicable to the subject of inspection.

Actions During the Inspection—Although inspectors should feel as though they have unimpeded access to applicable installation facilities, the escort team leader should be comfortable in requesting an inspection agenda, emphasizing the need to ensure the inspector's coordinated access to all requested facilities.

Actions After the Inspection—If not offered by the inspector, it is appropriate to request a briefing where the inspector can offer any impressions of perceived violations, make recommendations, and discuss probable courses of action and anticipated timeframes.

Finally, it is recommended that confrontations with the inspectors be avoided. If a regulator's personality clashes with one of the escort team members, that team member should either be counseled or replaced. In addition, policy and legal issues should not be debated at any time during the inspection. ☙

Fort Riley Lithium Battery Management Program Earns Kansas Pollution Prevention Award

By J.D. Hardesty
Staff Writer, Fort Riley Post

Fort Riley's Lithium Battery Management program recently received the 2004 Kansas Department of Health and Environment Pollution Prevention Award in the new initiatives category.

"Receiving the award is a great honor recognizing our program," said Dick Clement, Fort Riley's waste minimization coordinator in the Pollution Prevention Division of the Directorate of Environmental and Safety. The Pollution Prevention Division's program reduces the number of batteries at Fort Riley requiring hazardous waste disposal. The program also helps prevent possible accidental fires or explosions from damaged or unserviceable lithium battery power sources.

"Fort Riley's Lithium Battery Management program is the most comprehensive program Army wide," said Fernando Mancini, chief of Command, Control, Communications, Computers, Surveillance and Reconnaissance in the Engineering Division, Directorate for Safety, U.S. Army Communications-Electronics Command. "My congratulations on receiving the state's pollution prevention award."

"But, more importantly, Soldier safety is our major concern. The batteries can vent and release toxic gas, start a fire or explode," said Clement.

To improve safety, Fort Riley implemented a new approach for the containment, discharge and disposal of the installation's lithium batteries. New storage facilities were purchased to provide an isolated, climate-controlled environment for the safe discharge of batteries. The storage buildings' walls, roofs and ceilings are made of non-combustible material to withstand two hours of fire. The buildings are constructed with automatic temperature-control systems; screened air-inlet vents, fire dampers and self-contained, electro-mechanical ventilation systems to prevent batteries from overheating.

"Education and training are paramount to the program's success," Clement said. "To my knowledge, there is no other safety class on lithium battery handling and disposal in the Army."

EPA and State of Kansas regulations require batteries containing lithium sulfur dioxide to be disposed of as hazardous waste. However, discharging renders lithium batteries less reactive. This allows them to be disposed of as non-hazardous (solid) waste.

Since the program's inception in October 1999, the lithium battery program reduced the amount of lithium batteries discarded as hazardous waste by 66 percent, Clement said.

Battery testing is aimed at identifying batteries with 70 percent or more of its capacity intact. These batteries are re-issued to units.

Overall cost savings from battery reuse and hazardous material disposal costs to discard charged batteries saved the installation more than $114,600 in less than five years.

"What we have saved in procurement and disposal cost has paid for the entire program," Clement said. "We have the only centralized Hazardous Material Processing Center in the Army to completely discharge lithium batteries."

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native grass landfill covers and posted warning signs for the public.

Installation Restoration Program (IRP) staff also worked with installation staff to ensure that normal use of ordnance, as well as disposal of unexploded ordnance on Fort Riley to ensure that these activities do not contaminate the post's training areas.

The willingness of both sides to work together to determine ways for "getting clean and getting projects done" quickly helped Fort Riley save millions of dollars in the costs of cleaning up contamination, Phillips said.

Other top category awardees included Fort Drum, N.Y., the installation award for natural resources conservation; Fort Campbell, Ky., installation pollution prevention; Tobyhanna Army Depot, Pa., installation environmental quality; and U.S. Army Garrison, Alaska, installation cultural resources management by an installation. The team award for pollution prevention went to Radford Army Ammunition Plant, Virginia.

"These installations, teams, and individuals demonstrate the Army's commitment to successful stewardship of the environment. They represent some of the nation's most innovative and effective environment programs - programs that also enhance the Army's ability to provide the nation a secure future," said Raymond J. Fatz, Deputy Assistant Secretary of the Army for the Environment, Safety and Occupational Health. "Their dedication and expertise has earned them the Army's highest honor for outstanding environmental stewardship."

Fort Riley and other Secretary of the Army awardees were selected by representatives of the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the U.S. Coast Guard, the Advisory Council on Historic Preservation, the National Land Trust, the Nature Conservatory, the Office of the Federal Environmental Executive and regulators from Colorado, Maryland and Missouri served as judges. The awards will be presented sometime in the spring of 2005, according to an Army News Service release.

Army Environmental Legislative Committee: Call for Legislative Concepts and Proposals

The Army Environmental Legislative Committee or AELC serves as the coordinating unit within Headquarters, Department of the Army (HQDA) to facilitate participation in the federal legislative process. The Office of the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health (ODASA-ESOH) serves as the AELC chair and is supported by technical, legal and military experts. This group meets monthly

ODASA (ESOH) has issued a continuous call for Army environmental legislative proposals that may be submitted as concepts or proposals. Each May/June, the AELC makes recommendations on which proposals should be developed and submitted to the Office of the Secretary of Defense (OSD) for possible submission to Congress. Proposals approved by HQDA, OSD, and the Office of Management and Budget (OMB) as part of interagency coordination are submitted for inclusion in the Defense Authorization bill 2 years in the future.

AELC's role in this legislative process is to gather and track internal submissions of environmental legislative concepts, draft environmental legislative proposals, track and comment on environmental congressional bills that may significantly impact the Army, prepare comments on House vs. Senate environmental bills prior to conference prepare responses to congressional questions for the record on environmental issues, draft Army environmental congressional testimony and provide updates on the status of environmental bills.

Concepts/proposals submitted to AELC for consideration should include the following information:

- Pros and Cons;
- Law being modified; with a synopsis of the proposed legislative language;
- Justification and background/history of the "problem" including examples of how the absence of this legislation hinders the performance of the Army's mission;
- Expected improvement; and
- Point of Contact.

Legislative results to date include the following:

- Passage of three Range and Range Preservation Initiative (RRPI) proposals in FY03 Defense Authorization Act;
- Passage of two RRPI proposals in FY04 Defense Authorization Act.

If you have a suggestion for consideration, please submit the proposal through your chain of command to your organization's **AELC** point of contact. More information can be obtained from the **US Army Environmental Center (USAEC)** at (**410) 436-1220. USAEC** serves as secretary to the AELC and provides staff support to **AELC** meetings. ☙

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Center for Army Lessons Learned) Newsletter Number 04-19, November 2004, and an issue of the Engineer Bulletin (Oct-Dec 2004), devoted to the environment. DEI provided Environmental Compliance Officer (ECO) training materials to assist those units in theater in response to our forces operational requirements in Iraq.

- To meet the needs of mobilized National Guard (NG) and US Army Reserve (USAR) units, the DEI Training Division deploys Mobile Training Teams (MTT), upon request, to ARNG and USAR units. The MTTs specialize in environmental refresher training for key unit personnel. Recently, MTTs were deployed to Camp Atterbury (IN), Fort Benning (GA), Camp Shelby (MS) and Fort Stewart, GA.

In the "Facilities Domain," DEI deals with numerous environmental considerations that directly impact personnel health and safety of soldiers regarding the set up, operation and closure of base camps. Among these are - the location of the base camp, sanitation, use of incinerators and establishing satellite accumulation points. In addition:

- DEI works closely with other elements within the Corps of Engineers to support our Army at war by directly addressing issues such as base camp solid waste management, and initial environmental screening for force protection.
- The Oil Cat, a valuable pollution prevention and recycling device, is an excellent example of DEI integrating a "materiel" solution to support the Army at war. The Oil-Cat takes used engine crankcase oil and blends it with the vehicle's JP8 or DL2 fuel and utilizes this blend as fuel. The benefit of this process reduces the labor, equipment, and costs associated with the handling and disposal of used oil. Reusing lubricating oil as a fuel also reduces overall fuel needs and costs. Moreover, there is no excessive increase in air pollutants.
- Recognizing the value of this process, DEI coordinated an Operational Needs Statement from US CENTCOM to put 400 of these devices in operation in Iraq. This will significantly reduce the need to convoy used oil out of the country, and the exposure to convoy attacks by insurgents.

As the Army's proponent for environmental integration, the DEI is at the epicenter of the effort to form attitudes and behaviors that promote both accomplishment of the Army's combat mission and individual responsibility for environmental stewardship. This article highlights a few of the significant contributions the DEI makes daily to enhance the effectiveness of the Army's fighting forces, while minimizing their environmental footprint. For further information on USAES DEI, please go to: www.wood.army.mil/dei. ☙

Lieutenant Colonel Thomas S. Schorr, Jr., Commanding Officer, Lake City Army Ammunition Plant

Lieutenant Colonel Schorr assumed command of Lake Army Ammunition Plant on June 24, 2004. He received his commission from the Officers Candidate School, Fort Benning Georgia in 1986 as an ordnance officer. After completing the Ordnance Officer Basic Course, LTC Schorr served as the Executive Officer, Maintenance Officer, Emergency Actions Manager and COMSEC Custodian of 515th Ordnance Company, Redstone Arsenal Alabama. Upon completing the Advanced Course, he was assigned as the S1, 84th Ordnance Battalion, Muenchweiler Germany, before taking command of Head and Headquarters Command (HHC), 59th Ordnance Brigade in Pirmasens, Germany.

This was followed by the following assignments:

- Operations Chief of Savanna Army Depot, Savanna Illinois;
- Commander, Kansas Army Ammunition Plant, Parsons Kansas;
- Commander, Savanna Army Depot Savanna Illinois;

LTC Thomas Schoor, new commanding officer, Lake City Army Ammunition Plant. *Photo Courtesy of Lake City AAP.*

- Executive Officer, Multinational Forces and Observers, Sinai Egypt;
- Pacific Ammunition Plans Officer for United States Army, Pacific;
- Commander of HHC Army Service Component Command, United States Army, Pacific;
- The J4, United States Support Group, East Timor;
- Executive Officer, G4, United States Army Pacific; and
- Commander, Defense Logistics Agency Korea.

LTC Schorr received his Bachelor of Arts Degree from Otterbein College, Westerville Ohio and holds a Master of Arts Degree from Central Michigan University. He has also completed several military courses of study, including Nuclear Weapons Design Course, the Ordnance Officer Basic and Advanced Courses, the Combined Armed Services Staff School, and the U.S. Army Command and General Staff College. His awards and decorations include the Defense Meritorious Service Medal, Meritorious Service Medal, Joint Service Commendation Medal, Army Commendation Medal, Army Achievement Medal, Good Conduct Medal, Humanitarian Service Medal, National Defense Service Medal, and the Multinational Force and Observers Medal.

EPA Sets Reference Dose for Perchlorate

Consistent with the recommendations of the National Academy of Science's January 2005 report, EPA has set an official reference dose (R_fD) of 0.0007 mg/kg/day of perchlorate. The Agency considers this dose to be appropriate and protective for all populations, including the most sensitive subgroups. EPA's reference dose assumes total intake from both water and food sources. Moreover,

EPA's dose contains an uncertainty factor of 10 times to protect the most sensitive population, the fetuses of pregnant women. This uncertainty factor also covers variability among other human life stages, gender and individual sensitivities, protecting not only adults, but also premature neonates, infants and children.

Perchlorate exposure has the potential of affecting the thyroid gland by blocking iodide uptake. NAS identified the non-adverse effect of the inhibition of iodine uptake as the key biochemical event that precedes the occurrence of all potential adverse effects of perchlorate exposure. EPA's R_fD is health protective because it is designed to prevent the occurrence of changes that could lead to adverse health effects.

EPA's new R_fD translates to a Drinking Water Equivalent Level (DWEL) of 24.5 ppb. The DWEL assumes that all of a contaminant comes from drinking water and is the concentration of a contaminant in drinking water that will have no adverse effect with a margin of safety. Because there is a margin of safety built into the EPA's new R_fD and the DWEL, exposures above the DWEL are not necessarily considered unsafe. EPA's Superfund cleanup program plans to issue guidance based on the new EPA's new R_fD.

EPA's new R_fD for perchlorate will be posted on the agency's online IRIS database, which contains risk information on possible human health effects from exposure to chemical substances in the environment. The IRIS web site at: http://www.epa.gov/iris. The official DoD Perchlorate website is: http://www.dodperchlorateinfo.net/.

Microbes and Man Cooperate To Remediate Iowa AAP Contamination: Plant Efforts Encourages Feeding on Explosive Compound.

Darlene Norton
Environmental Manager, Iowa Army Ammunition Plant

No, this is not a remake of the movie "The Blob", an outer space glop of goo that eats the universe. But, this is in reality is the latest plan for purifying contaminated ground water at the Iowa Army Ammunition Plant. According to Rodger Allison, environmental restoration manager at the Iowa Army Ammunition Plant (IAAP), a dextrose or a sugar solution injected into polluted water on the southern half of the plant helps feed microbes that are already breaking down the contamination.

According to Allison it's nothing more than natural microbial activity that is being stimulated by a sugar solution.

Army officials have kept an eye on an off-site groundwater plume near the plant since 1999, when monitoring wells at the site revealed high levels of RDX.

Five temporary wells were placed along Old Highway 61 near the western intersection with Highway 61 in late 2004 to act as portals to carry the sugar to the polluted groundwater. Preliminary results have indicated that the microbial food has spread 20 to 40 feet from each injection point. There is also good evidence that the microbes are eating the dextrose. The next round of sampling should provide definitive evidence that the microbes are destroying the RDX.

Truck pumping dextrose into monitoring well. *Photo courtesy of Iowa AAP.*

While the Army has used the dextrose approach in other parts of the country, Allison said the effort along the old highway is a pilot project to gauge its effectiveness at IAAP.

The purpose of the pilot is to determine if it's going to work effectively at the contamination levels in the types of soils at IAAP Allison said.

While reasonably positive the dextrose will do the job in the sandy soil where the wells are placed, Allison is less certain about potential effectiveness in other areas where the ground is largely clay.

"We'll let the dextrose spread out, and then we'll check to see if there's a diminished level of the explosive contamination," Allison said. Upon completion of the pilot study, a few of the wells will be left in place, in case the microbes need some additional *sweetening*.

(Continued from page 3)

son to other species on other bases, the cost of our endangered species program is very small," he said. Moreover, Wampler stated that cowbird trapping has helped many other bird species in the area return in greater numbers.

According to Wampler, the most important thing that people can do for the vireo is the continued support of programs such as Fort Sill's endangered species program. "There is little people can do to help since most of the nesting happens on Fort Sill's ranges and the refuge," Wampler said.

To aid the revival of the black-capped vireo populations, the Department of the Army, Oklahoma Department of Wildlife Conservation, and The Nature Conservancy have formed a partnership. The Army has maintained and increased usable vireo breeding habitat at Fort Sill, which has resulted in increases in the Wichita Mountains National Wildlife Refuge population. Fort Sill natural resources staff monitor vireo populations and control brown-headed cowbirds by trapping methods.

The Oklahoma Department of Wildlife Conservation has provided funds to The Nature Conservancy for vireo population monitoring and brown-headed cowbird control on private lands in Oklahoma. The Nature Conservancy encourages private landowners to participate in vireo recovery activities and also monitors vireo populations, surveys for additional vireos, and assists in cowbird control and vireo habitat management.

With this type of cooperative effort, the rare little bird known as the black-capped vireo will continue to survive through habitat management and parasite population control. A dedicated team of Army natural resources staff and biologists from the USFWS and the State of Oklahoma have been successful in the recovery of black-capped vireo in its northern-most breeding range while maintaining the military mission of one of the few Army live artillery ranges in the Nation. Because of their efforts, Fort Sill's readiness and training activities have continued with virtually no conflicts.

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Mission: The CREO supports the Army and DoD mission through coordination, communication and facilitation of regional environmental activities. The Army REOs are part of a DoD network in which the Army, Air Force and Navy each has lead responsibility for mission implementation in the 10 Standard Federal regions. The CREO has DoD lead responsibility for Region 7 and Army lead responsibility for Regions 6 & 7.

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